

REMARKS

Favorable reconsideration and withdrawal of the rejection set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claims Status

Claims 13 through 26 remain pending in the application. Claims 13, 18, 23, and 25 have been amended to even more succinctly define the invention and/or to improve their form. It is respectfully submitted that no new matter has been added. Claims 13, 18, and 23 are the only independent claims pending in the application.

Art Rejection

Claims 13 through 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,669,277 (Perrone) in view of U.S. Patent No. 6,241,234 (Saitoh, et al.).

The rationale underlying the foregoing rejection is succinctly set forth in the Official Action.

Response to Rejection

The rejection is respectfully traversed.

Independent Claim 13

Amended independent Claim 13 calls for a sheet punching device, which cuts holes in a sheet conveyed at predetermined intervals while punches are entering die holes. The sheet punching device includes: a plurality of punch trains, each of which includes a plurality of the punches axially aligned on a rotating shaft and projecting in a radial direction of the shaft. A plurality of initial position detecting sensors are disposed in

correspondence with the plurality of punch trains respectively, and detect an initial position of each of the plurality of punch trains in a rotation direction of the shaft. The plurality of punch trains are disposed with a phase difference in the rotation direction of the shaft relative to one another. The die holes are disposed in correspondence with the plurality of punches. One of the plurality of punch trains is selectively used in cutting holes in the sheet at a predetermined timing corresponding to sheet conveyance intervals, and herein one of the plurality of punch trains selected for use, is set at the initial position based on a signal from the plurality of initial position detecting sensors.

Perrone discloses a hole punching apparatus, which cuts holes in an elongated paper strip 34 using an upper punch roller 16 and a lower die roller 18. Rollers 16 and 18 are keyed to shafts 20, 22, respectively, which are secured in stanchions 24, 26. The rollers 16 and 18 are driven in counter directions relative to each other by respective gears 28, 30. A drum pinion 32 delivers power from a drive motor (not shown). See column 4, lines 3 through 14.

Rollers 16 and 18 carry two sets of punch trains each of diametrically opposed punches 42 and dies 44 to alternately produce the holes 36 and perforations 40, respectively, as shown in Figure 1. The punches 42 and dies 44 are secured into a pattern of 23 punch seats 60 and die seats 62, which are machined into the rollers 16, 18. See column 4, line 53 through column 5, line 6. One set of punches and dies are provided to punch holes and the other set of punches and dies are provided to cut perforations in the strip 34. After being punched, strip 34 is then separated or cut along the perforations 40 to provide individual pages. See column 4, lines 25 through 32. The spatial relationship of the punches and the corresponding die holes is fixed on their respective rollers. Once the

rollers are positioned in the stanchions they are not displaceable with respect to each other.

Accordingly, the sets of punch and die also are not displaceable with respect to each other.

Perrone only provides for changing the number of punches and corresponding dies that are secured in the punch and die seats. In Perrone, holes and perforations are always made to create individual punched-hole sheets from an elongated strip. Perrone does not disclose or suggest selectively using one of a plurality of punch trains as recited in amended Claim 13.

In addition, the Examiner correctly recognizes that Perrone also does not disclose or suggest use of an initial position detecting sensor as also recited in amended Claim 13. Accordingly, the Examiner relies on Saitoh, et al. for disclosing an initial position detection sensor.

Perrone has no need for an initial position detection sensor. *A fortiori* Perrone does not disclose or suggest a plurality of rotational direction initial position detecting sensors disposed in correspondence with a plurality of punch trains. Once the rollers are machined with the 23 punch seats and the seats are fixed in the stanchions, the operator merely selects a configuration of punches and dies to affect the desired hole and perforation patterns. Then, the elongated sheet may be continuously fed through the apparatus.

Saitoh, et al. discloses an initial position sensor 71 used in moving a hole punching means 60 in a direction along a width of a sheet. (See Figures 13 and 14). However, Saitoh, et al. does not disclose a plurality of initial position detecting sensors disposed in correspondence with a plurality of punch trains respectively for detecting an initial position of each of the plurality of punch trains in a rotation direction of a shaft of a punch train. In Saitoh, et al., the initial position sensor 71 and a lateral edge detecting means 80 are

different in structure, function, and operation from the claimed plurality of initial position detecting sensors.

Accordingly, even if the teachings of Saitoh, et al. were combined with those of Perrone, the claimed invention would not result from such a combination.

In view of the foregoing, it is respectfully submitted that amended independent Claim 13 is allowable over Perrone and Saitoh, et al. whether taken individually or in combination.

Independent Claim 18

Amended independent Claim 18 also calls for a sheet punching device including a plurality of punch trains disposed on a shaft and a plurality of initial position detecting sensors, which detects an initial position of each of the plurality of punch trains in a rotation direction of the first shaft.

It is respectfully submitted that amended independent Claim 18 also is allowable over Perrone and Saitoh, et al. whether taken individually or in combination for at least the same reasons given above with respect to amended Claim 13.

Independent Claim 23

Independent Claim 23 calls for a sheet punching device which cuts holes in a sheet conveyed at predetermined intervals while punches are entering die holes. The sheet punching device includes a plurality of punch trains, each of which includes a plurality of punches axially aligned on a rotating shaft and projecting in a radial direction of the shaft. The plurality of punch trains are disposed with a phase difference in a rotation direction of the shaft relative to one another. The die holes are disposed in correspondence with the plurality of punches. The number of the plurality of punches in the plurality of punch

trains are different from each other. One of the plurality of punch trains is selectively used in cutting holes in the sheet. After the sheet in which holes are cut by the one of the plurality of punch trains has passed, punches of another of the plurality of punch trains and die holes are engaged with one another during the predetermined intervals.

Claim 23 calls for a feature in that after the sheet in which holes are cut by the one of said plurality of punch trains has passed, punches of another of said plurality of punch trains and die holes are engaged with one another during the predetermined intervals.

As above-noted with respect to Claims 13 and 18, Perrone discloses punching holes and perforations in an elongated strip. Perrone does not teach a plurality of punch trains. Similarly, Saitoh, et al. discloses only one punch train.

In fact, the rejection of Claim 23, which does not recite an initial position detection sensor over the combination of Perrone and Saitoh, et al., the latter of which is cited for disclosing a sensor, does not appear to be well made. If the rejection is maintained, the Examiner is kindly requested to clarify such in the next Official Action.

It is respectfully submitted that amended independent Claim 23 also is allowable over Perrone and Saitoh, et al. whether taken individually or in combination.

It is also respectfully submitted that the combination rejections is not well founded. A combination rejection is proper only when there is some suggestion or motivation in the cited art *per se* to cause one having ordinary skill in the art to combine the teachings of the cited art. The Examiner has provided a *rationalization* for combining the teachings of the cited art based on the benefits of doing so. Specifically, the Examiner argues that it would be obvious to modify the teaching of Perrone with those of Saitoh, et al. “in order to obtain a device to accurately punch the sheet without stopping the sheet”. The Examiner has not

identified any basis in the cited art for modifying the teachings of Perrone with the teachings of Saitoh et al. As above-noted, there is no need to include an initial position detection sensor in the apparatus of Perrone. Accordingly, the sensor would serve no purpose. Moreover, the apparatus of Perrone is designed to continuously punch an elongated strip. Perrone does not disclose or suggest any concern with accurately punching a sheet without stopping a sheet. Accordingly, there is no suggestion or motivation in Perrone for modifying the disclosed structure to include an initial position detection sensor, much less a plurality of sensors as recited in amended Claims 13 and 18.

In the absence of such a basis in the cited art to combine the teachings of the cited art, it is respectfully submitted that the motivation to modify the teachings of the cited art must come from Applicants claims. For example, see ACS Hospital Systems, Inc. v. Montefiore Hospital, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

In regard to the examiner's Response to Arguments, it is respectfully submitted that Perrone does not teach a selection of a plurality of punch trains as above-noted. The argument that Saitoh, et al. does not teach a feature in support of the position that the teachings of Saitoh, et al. can be combined with the teachings of Perrone is not understood. It is respectfully submitted that a combination rejection is well made based on what the art does teach, i.e., a suggestion or motivation to combine the teachings, not on the basis of what the art does not teach.

In view of the foregoing, it is respectfully submitted that independent Claims 13, 18, and 23 are allowable over the cited art whether taken individually or in combination.

Dependent Claims

Claims 14 through 17, 19 through 22, and 24 through 26 depend either directly or indirectly from one of independent Claims 13, 18, and 23 and are allowable by virtue of their dependency and in their own right for further defining Applicants' invention. Individual consideration of the dependent claims is respectfully requested.

Request for Personal Interview

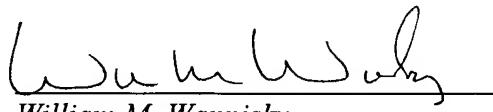
If there is any reason precluding allowance of this application, the Examiner is kindly invited to contact Applicants' undersigned attorney to arrange for a personal interview to expedite prosecution with a mind to place the application in condition for allowance.

Closing Comments

It is respectfully submitted that the pending claims are allowable over the art of record and that the application is in condition for allowance. Favorable reconsideration and early passage to issue of the present application are earnestly solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our New York office at the address shown below.

Respectfully submitted,



William M. Wannisky
Attorney for Applicants
Registration No. 28,373

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

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